

SECTION 1: THE IMPACTS OF TOURISM AND HOSPITALITY ON THE ENVIRONMENT

Like all industries, tourism has an impact on the environment. It is a large consumer of natural and other resources such as land, water, fuel, electricity, and food, and generates significant quantities of waste and emissions. The World Tourism Organisation (WTO) reported for 1999: 663 million international tourists (a 4% increase from 1998), 10 times that many domestic travellers and a colossal US\$453 billion spending on international tourism (a 3% increase from 1998). The industry's environment impact is obviously of huge significance.

Tourism has a vested interest in maintaining environment quality, as the environment is its key resource. A clean and healthy environment is critical for successful tourism. All over the world, from coastlines in Asia, the Caribbean and the Mediterranean to national parks in Africa, and to mountain resorts in North America and Europe, environment degradation caused by tourism has and continues to bring business losses. Nobody wants to go to the beach where the water is polluted, to visit countryside lined with ribbon developments or walk in parks littered with packaging and disposable waste. As visitor numbers fall, so do prices, then profits. Prices are slashed as tourism operators struggle to stay in business. There being little or no cash for maintenance, repair, or waste management, prevailing environment impacts are worsened. Shabby facilities and poor service further reduces destination quality, and demand continues to drop. To short-circuit this vicious cycle, environment improvements are vital.

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COMMON QUESTION What is an environment impact?

An environment impact is the change in an environment parameter (or medium) resulting from a given activity, compared with the natural rate of environment change that would have occurred had the activity not taken place. For example, the environment impacts of a marina are changes in the lagoon's ecosystem due to anchoring, the movement of boats, oil, sewage and other chemical discharges, etc. These changes include water pollution, the death of some species of marine life, and increased noise levels. These effects are then compared to those that would have naturally taken place in the same lagoon had the marina not been built. This could be the gradual sedimentation and build-up of vegetation and marine life towards that of a wetland, or strong tidal movements that would remove and renew nutrients to maintain the existing lagoon ecosystem. As this example shows, environment impacts have to be considered over a specific area and within a specific period of time.

Environment impacts can be direct or indirect. Direct impacts are those caused directly by a given activity, while an indirect impact occurs as a follow-on or snowball effect.

The impacts of tourism and hospitality on land, air and water, as well as several other related issues will be discussed in what follows. The discussion will include impacts that occur during the construction of infrastructure and facilities, as well as those that occur during their use and occupation.

The following discussion will help improve appreciation of how the impacts of tourism contribute towards the global environment issues discussed in Unit 1.

Many of the world's major tourism city destinations – Bangkok, Paris, Rome, Los Angeles, Mexico City, New York, Athens, and Manila – are also on the global list of urban areas with very poor ambient air quality.

¹ The worldwide phasing-out of ozone-depleting chemicals is in progress under the Montreal Protocol on Ozone Depleting Substances. More information can be found in Unit 1 and Unit 4.

1.1 Impacts of Tourism on Air

With over 650 million people travelling internationally and ten times that number travelling domestically, road, rail and air transport are major contributors to global warming, climate change, photochemical smog and poor air quality. Road traffic also causes noise, dust, congestion and particulate emissions that are worsened in many cities by badly maintained exhaust systems. It is worth noting that many of the world's major tourism city destinations – Bangkok, Paris, Rome, Los Angeles, Mexico City, New York, Athens, and Manila – are also on the global list of urban areas with very poor ambient air quality.

Transport is also an important activity when tourism facilities are being designed and built. Building materials, machinery, furniture and fittings have to be transported to the site and construction waste has to be disposed of. Once buildings are occupied, businesses directly contribute towards air pollution through the use of fossil fuels and ozone-depleting substances¹, as well as the purchase of goods and services that need to be transported long distances.

In many countries electricity is generated by burning fossil fuels and as hospitality businesses in these countries are big electricity consumers, they contribute to air emissions that way too.

Emissions from aircraft, especially nitrous oxides, have greater impact when released at high altitudes. Air traffic control delays, airport congestion and fuel jettisoning (even though rare) all contribute to air pollution.

1.2 Impacts of Tourism on Land

• LAND USE ISSUES

The hospitality industry is often held responsible for the expansion of urban sprawl and the use of hitherto untouched natural areas, especially mangroves, mountains and forests, for further development. While this can bring much-needed water, power and transport infrastructure, it also creates competition with traditional land uses such as agriculture, fisheries and forestry.

Mangroves, forests and mountains are constantly under pressure for resort development. Coral reefs and forests are further exploited as sources of building materials which leads directly to land degradation and biodiversity loss.

Land use conflicts can be observed in many coastal regions, where the local fishing industry has vehemently opposed tourism development. The fishermen argue that tourism not only destroys the coastal environment and near-shore fishing grounds, but brings them only very meagre revenues.

• RESOURCE CONSUMPTION

Hospitality businesses and tourists themselves consume large proportions of basic resources, which are often in short supply. It is usual practice in many resort areas for local people to live through cuts in power, water, fuel and food supplies during peak seasons, to meet the needs of tourists. Consider the following facts:

- Several species of shellfish are on the brink of extinction in the Caribbean because of over-fishing. The main demand for shellfish comes from tourists;

- In the Mediterranean, one tourist uses the same amount of water as 8 local people;
- A 5-star hotel in Cairo consumes the same amount of electricity as 3,600 middle-income households;
- In Nepal, a country plagued with deforestation and desperate for fuel, a trekking tourist can use four to five kilograms of wood a day.

• LAND DEGRADATION

Poor land-use planning coupled with unsustainable siting, engineering and construction of tourism facilities can cause erosion, landslides and flooding. For example, in many low-lying and coastal areas, tourist facilities constructed on the waterfront may increase these risks if natural protective features such as dunes and vegetation cover have been destroyed. Walls and dams are often constructed in an effort to halt erosion, but these structures have been shown to exacerbate issues by increasing erosion, flooding, sedimentation and deposition further upstream or downstream.

• 'ARCHITECTURAL POLLUTION' AND SPRAWL

Tourism often fails to integrate its structures with the natural architectural features of the surrounding area. Large dominant resort buildings of varying design are out of place in any natural environment and may clash heavily with the indigenous architecture. Many tourism experts refer to this as 'architectural pollution' (Pearce 1978). Moreover in the absence of building and planning regulations, tourism developments tend to expand in sprawling ribbons along coastlines, valleys and scenic routes. They bring with them problems of litter, waste and effluent disposal, and traffic congestion, which contribute to increased pollution of air, water and land.

Tourism, building and planning professionals have recently begun to realise that building design and ambience have a dollars-and-cents value. In many countries a new development is often preceded by the definition of visual envelopes, and by presenting graphic and other illustrations of it as seen from different angles. Environment-compatible design is discussed in Unit 5.

• LOSS OF VEGETATION

Building and construction often involves soil removal, land reclamation, filling, dredging and levelling, which can involve the removal and sometimes total destruction of the site's vegetation. This causes serious interruptions in the natural cycles of the surrounding ecosystem. Indirect impacts include erosion, species loss, waterway pollution, fire risks, and the introduction of non-native species to the area. Litter and waste dumping can also affect vegetation by changing the nutrient balance of soils and by blocking out air and light.

Vegetation can also be damaged by the activities of tourists:

- Camping, trampling, and the construction of pathways can lead to the loss of cover vegetation, which increases erosion and linear soil blowouts. The extent of damage depends on intensity of use and the ecosystem's vulnerability. In flat areas with compact soils and a large number of resilient plant species, the effects may be minimal; but on hills and dunes, the vegetation is much more vulnerable. Trampling is also reported to have a negative effect on the root base of certain species, the sequoia redwood, for example.

- Constant picking of flowers, plants and fungi can change species composition.
- The deliberate chopping down of young trees to be used as walking sticks, tent poles or firewood can be disastrous to the ecosystem. The removal of young trees alters the age structure of the plant community and leaves fewer trees to mature.

Facts about Vegetation Damage

- The greatest damage to vegetation occurs during the initial use of the area, when the rare and fragile species are destroyed and recovery is dominated by the more resilient species.
- With continued use, only the more tolerant species survive and some non-native species may be introduced. This reduces species diversity.
- There is a strong relationship between soils and vegetation. Soil compaction (caused by erosion, water and nutrient loss) affects plant growth and the age structure of vegetation.

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EFFECTS ON WILDLIFE

Viewing, photographing and in some cases hunting wildlife are all important tourist activities. But over the last 30 years the evidence has been mounting to suggest that tourism is again becoming a victim of its own success. As early as 1975, travel writers reported that much of the attraction of game viewing lay not simply in the presence of animals, but in the absence of tourists and minibuses. The ever-increasing number of tourist lodges, campsites and safari vehicles, coupled with the increasing reliance of expanding local populations on natural parks and reserves for agricultural land, food and fuel, are frequently exceeding the natural carrying capacities of these areas.

The impacts of tourism on wildlife include:

- Interruptions to feeding and breeding habits and predator-prey relationships of animals. Especially at fault are tourist vehicles that chase and track down animals in order to get a good photograph. Wildlife writers have also recorded numerous occasions when young animals get fatally separated from their mothers by the illegal off-road driving of safari vehicles, as well as many instances when noisy tourists have interrupted the hunting of predators.
- The creation of game reserves has helped some species to proliferate unnaturally. This can stimulate fighting and lead to habitat destruction. For example, in recent years the elephant population in the game reserves of Central and Southern Africa has increased dramatically. These large populations have uprooted trees and stripped away vegetation cover, reducing the food available for many browsing species such as the giraffe.
- Littering and waste dumps by tourists and hospitality lodges attract rodents, birds and species such as bears. This affects these animals' traditional feeding patterns and raises safety issues for tourists and

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local inhabitants. The use of animals for souvenir manufacturing is internationally banned, but poaching still thrives everywhere. This will continue as long as skins, furs, horns, shells, tails, hoofs, tusks, claws and stuffed animals fetch high prices, and as long as adequate revenues from tourism do not filter down to the local population.

All these impacts collectively affect the further growth and survival of animal species and, as with vegetation loss, contribute directly to global biodiversity loss.

1.3 *Impacts of Tourism on Water*

Tourism is clearly not the only major source of water pollution; a host of other industries and authorities are, too. But tourism is different: clean rivers, coastlines and lakes, where people can bathe, swim, sail and fish are essential for good business.

The Effects of Water Pollution

- Poorly treated or untreated sewage released into water introduces pathogens, which are a human health hazard. Sewage in seawater is especially critical, since the salinity of the water inhibits the natural bacterial breakdown of the waste.
- Cholera, typhoid, dysentery, hepatitis, and a variety of skin and eye diseases can be transmitted through contaminated water, fish and all other seafood.
- Solid wastes and effluents dumped in deeper water are often washed up on the shore. This is not only unsightly and unhealthy: damage to aquatic life is inevitable.
- Sewage and waste in water increase its nutrient levels, which can speed up eutrophication. Excessive plant growth affects the volume of dissolved oxygen, which in turn will reduce the growth and diversity of aquatic invertebrates and fish.
- Oil spills from pleasure boats and ships can kill birds and all forms of aquatic life.
- Heavy metal and chemical run-offs from tourist boats, marinas and other such facilities are toxic to aquatic life. Some of these chemicals are surprisingly stable in the environment; they can accumulate in the fatty tissues of aquatic animals and birds further up the food chain.
- Erosion increases silting, which reduces the dissolved oxygen supply for animals and plants, and the amount of sunlight penetrating the water.
- The removal of coral, live shells and other life forms from reefs for the making of tourist souvenirs causes the reef and a large section of the coastal ecology to die.

1.4 *Other Related Issues*

Apart from the impacts on air, land and water, some important environment issues arise directly as a result of tourism:

- Congestion and noise due to overcrowding, be it in urban areas, natural parks, visitor attractions or recreational waterways, can cause considerable stress both to the local environment and to its population. Traffic jams, long queues, delays in service delivery, noise, shortages of power, water and foods all increase environment impacts.
- The seasonal characteristic of tourist arrivals leaves many facilities vacant for large portions of the year. This has serious consequences for businesses in terms of cash flow and facility maintenance. Poorly maintained facilities mean increased environment impacts.

SECTION 2: AN INTRODUCTION TO THE SOCIAL AND CULTURAL IMPACTS OF TOURISM

Tourism can have significant impacts on the cultural and social lifestyles of the host populations. Often referred to as 'people' impacts, these dynamic and varied effects give rise to changes in lifestyles, value systems, traditional practices, family and community relationships, moral conduct, and health and safety concerns in holiday destinations. Tourism's social and cultural impacts have received significant attention from planners and academics and are well documented. In fact, we now recognise it as an entire academic discipline of its own, with application not only to tourism, but to geography, modern history, anthropology and a number of other areas.

These social and cultural impacts are beyond the scope of this pack and their discussion is therefore limited to a few selected issues that are of concern to many destinations. It does not, however, reduce their importance for sustainable tourism, which calls for tourism that is managed (to a large extent) by local people, respects local tradition and culture, and equitably and tangibly enhances the living conditions in tourist destinations.

Some of the key social and cultural impacts of tourism and hospitality are listed below.

- Land tenure and ownership issues have arisen, especially surrounding national parks and reserves established on land that has traditionally belonged to indigenous communities.
- The roles and rights of local people (including indigenous communities) living in and around protected areas has given rise to conflict between these communities and area management bodies.
- The overcrowding and concentration of tourist infrastructure can create 'tourist ghettos' where basic infrastructure and resources have to be shared between tourist facilities, local industry and households. When shortages arise during the high season, tourist facilities are given priority, which can cause animosity and tension in local communities.
- Some tourist attractions being also sites of local cultural and religious significance, conflict can arise between local communities and the tourism industry.
- The apparent wealth of tourists may cause antagonism and encourage the 'demonstration effect'. Tourists are seen to possess such 'attractive' material goods as cameras, electrical devices, trendy clothes, etc. They also appear to have a carefree lifestyle, an impression enhanced by the fact that people on holiday may behave far less responsibly than they do at home. This can lead to the development of an inferiority complex amongst local people, especially the local youth, encouraging them to change their values and lifestyles by imitating the behaviour and consumption patterns of tourists. This is called the 'demonstration effect'.
- Tourism has been accused of introducing and increasing alcoholism, gambling, prostitution and drug abuse among local people, leading directly to increased crime rates and health concerns.

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- While tourism provides a market for the continuation of traditional arts and crafts, it is often accused of encouraging the development of pseudo-art forms which degrade and devalue traditional practice and culture. It is also argued that traditional practices of interest to tourists are often those that are the most unimportant and least valuable to local cultures. Tourism is further accused of commercialising traditional ceremonies and art forms.

Certainly, these changes cannot be attributed to tourism alone; in fact, it is debatable if tourism is still an influence at all. Worldwide economic and trade expansion, coupled with the increasing influence of western 'material' economies, also play a large part.